



APPALACHIAN MOUNTAIN ADVOCATES

Great Horned Owl © Estate of Roger Tory Peterson

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July 8, 2015

logged by KCB

Penn Virginia Operating Co., LLC
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LCC West Virginia, LLC
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By Certified Mail - Return Receipt Requested

Re: 60-Day notice of Intent to File Citizens Suit Under Clean Water Act Section 505(a)(1) for Violations of Section 301 of that Act.

To Penn Virginia Operating Co., LLC and LCC West Virginia, LLC,¹

The Sierra Club, Ohio Valley Environmental Coalition, and West Virginia Highlands Conservancy, in accordance with section 505 of the Clean Water Act (the "Act" or the "CWA"), 33 U.S.C. § 1365, and 40 C.F.R. Part 135, hereby notify you that Penn Virginia Operating Co., LLC ("Penn Virginia") has violated, and continues to violate, "an effluent standard or limitation" under Sections 301(a) and 505(a)(1)(A) of the Act, 33 U.S.C. §§ 1311(a), 1365(a)(1)(A), by discharging pollutants from at least six unpermitted point sources. In the alternative, the Sierra Club, Ohio Valley Environmental Coalition, and West Virginia Highlands Conservancy, hereby notify you that Penn Virginia has violated, and continues to violate, "an effluent standard or limitation" under Sections 301(a) and 505(a)(1)(A) of the Act, 33 U.S.C. §§ 1311(a), 1365(a)(1)(A), by discharging pollutants at least three unpermitted point sources and LCC West Virginia, LLC ("LCC") has violated, and continues to violate, "an effluent standard or limitation" under Sections 301(a) and 505(a)(1)(A) of the Act, 33 U.S.C. §§ 1311(a), 1365(a)(1)(A), by discharging pollutants from at least three unpermitted point sources. Those point sources are located in Kanawha County, West Virginia on property that was formerly subject to surface coal mining activities. Each of the six point sources is discharging pollutants, including (1) selenium, (2) total dissolved solids (TDS), (3) sulfates, and (4) other ions associated with the measure of conductivity in surface coal mine drainage.² If, within sixty days

¹ The names of the President, CEO, or managing agent of Penn Virginia Operating Co., LLC and of LCC West Virginia, LLC are not publicly available.

² Conductivity is a measure of how well a certain solution conducts an electrical current. It effectively measures the salinity of a solution. The ions that contribute to conductivity in coal mining discharges are pollutants under the Clean Water Act. See *Ohio Valley Environmental Coalition, Inc. v. Fola Coal Co.*, 2014 WL 4925492 (S.D. W. Va.

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of the postmark of this letter, Penn Virginia and LCC do not bring their discharges into full compliance with the Act, either by obtaining and complying with a WV/NPDES permit with appropriate effluent limitations or by ceasing the discharge of pollutants through treatment or otherwise, we intend to file a citizen suit seeking civil penalties for Penn Virginia and LCC's ongoing violation and an injunction compelling Penn Virginia and LCC to comply with the Act.

I. Factual Background

Upon information and belief, Penn Virginia is and has been at all relevant times the owner of land upon which the Kayford Mountain Top Mine, the Kayford Mountain Top No. 2 Mine, and Mine No. 29 were located. The West Virginia Department of Environmental Protection "WVDEP" first issued Surface Mining Permit S600989 on May 21, 1990 for the Kayford Mountain Top Mine. Mining on this land was conducted by Princess Beverly Coal Company pursuant to Surface Mining Permit S600989 and WV/NPDES Permit WV1012461. Mining occurred in high selenium coal seams including the No. 6 Block, No. 5 Block, and Coalburg seams. Surface Mining Permit S600989 was transferred to LCC on November 17, 2005 and WV/NPDES Permit WV1012461 was transferred to LCC on January 25, 2006. Surface Mining Permit S600989 was released on December 22, 2010. All outfalls were deleted from WV/NPDES Permit WV1012461 in a modification dated September 15, 2010. Upon information and belief, there is no current permit for mining and reclamation activities on the former Kayford Mountain Top Mine. There is also no permit covering point source discharges from the former Kayford Mountain Top Mine, although LCC continues to hold WV/NPDES Permit WV1012461 for stormwater coverage only.

During operations on the Kayford Mountain Top Mine, a valley fill was constructed in an unnamed tributary of Tenmile Fork at mile point 5.64. That fill is referred to as Durable Rock Fill A in Surface Mining Permit S600989 files. Durable Rock Fill A continues to discharge pollutants and those discharges are not currently regulated by a permit issued by WVDEP or any other regulatory agency. Discharges from Durable Rock Fill A flow directly into UNT/Tenmile Fork RM 5.64. Upon information and belief, Penn Virginia and LCC are the entities with control over those discharges.

WVDEP first issued Surface Mining Permit S302791 on July 6, 1992 for the Kayford Mountain Top Mine No. 2. Mining on this land was conducted by Princess Beverly Coal Company pursuant to Surface Mining Permit S302791 and WV/NPDES Permit WV1012461. Mining occurred in high selenium coal seams including the No. 6 Block, No. 5 Block, Stockton, and Coalburg seams. Surface Mining Permit S302791 was transferred to LCC on November 17, 2005 and WV/NPDES Permit WV1012461 was transferred to LCC on January 25, 2006. Surface Mining Permit S302791 was released on November 18, 2013. All outfalls were deleted from WV/NPDES Permit WV1012461 in a modification dated September 15, 2010. Upon information and belief, there is no current permit for mining and reclamation activities on the former Kayford Mountain Top Mine No. 2. There is also no permit covering point source discharges from the

Sept. 30, 2014). The specific ions that primarily contribute to high conductivity in mining-influenced effluent in Central Appalachia are Ca^{2+} , Mg^{2+} , SO_4^{2-} , and HCO_3^- . See US EPA, A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams (Final Report), March 2011, at xiv, [available at](http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=233809) <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=233809>.

former Kayford Mountain Top Mine No. 2, although LCC continues to hold WV/NPDES Permit WV1012461 for stormwater coverage only.

During operations on the Kayford Mountain Top Mine No. 2, a valley fill was constructed in the headwaters of Tenmile Fork. That fill is referred to as Durable Rock Fill B in Surface Mining Permit S302791 files. Durable Rock Fill B continues to discharge pollutants and those discharges are not currently regulated by a permit issued by WVDEP or any other regulatory agency. Discharges from Durable Rock Fill B flow directly into Tenmile Fork. Upon information and belief, Penn Virginia and LCC are the entities with control over those discharges.

A second fill was constructed on the Kayford Mountain Top Mine No. 2 in the western headwaters of Fifteenmile Fork. That fill is referred to as Durable Rock Fill C in Surface Mining Permit S302791 files. Durable Rock Fill C continues to discharge pollutants and those discharges are not currently regulated by a permit issued by WVDEP or any other regulatory agency. Discharges from Durable Rock Fill C flow directly into Fifteenmile Fork. Upon information and belief, Penn Virginia and LCC are the entities with control over those discharges.

WVDEP first issued Surface Mining Permit Z002781 on August 18, 1981 for Mine No. 29. Mining on this land was conducted by Princess Beverly Coal Company pursuant to Surface Mining Permit Z002781 and WV/NPDES Permit WV0053236. Mining occurred in high selenium coal seams including the No. 5 Block, Clarion, and Coalburg seams. The final increment of Surface Mining Permit Z002781 was released on September 25, 2013. All outfalls were deleted from WV/NPDES Permit WV0053236 in a modification dated February 25, 2010 and the WV/NPDES permit was completely released on March 14, 2014. Upon information and belief, there is no current permit for mining and reclamation activities on or point source discharges from the former Mine No. 29.

During operations on Mine No. 29, multiple valley fills were constructed. Valley Fill No. 1 was constructed in Gibson Branch of Fifteenmile Fork. Valley Fill No. 1 continues to discharge pollutants and those discharges are not currently covered by a permit issued by WVDEP or any other regulatory agency. Discharges from Valley Fill No. 1 flow directly into Gibson Branch. Upon information and belief, Penn Virginia is the entity with control over those discharges.

Valley Fill No. 2 was constructed in Short Branch of Fifteenmile Fork. Valley Fill No. 2 continues to discharge pollutants those discharges are not currently covered by a permit issued by WVDEP or any other regulatory agency. Discharges from Valley Fill No. 2 flow directly into Short Branch. Upon information and belief, Penn Virginia is the entity with control over those discharges.

Valley Fill No. 3 was constructed in the southern headwaters of Fifteenmile Fork. Valley Fill No. 3 continues to discharge pollutants and those discharges are not currently covered by a permit issued by WVDEP or any other regulatory agency. Discharges from Valley Fill No. 3 flow directly into Fifteenmile Fork. Upon information and belief, Penn Virginia is the entity with control over those discharges.

WV/NPDES Permit WV1022113, held by Alex Energy, Inc., requires instream monitoring at locations in Tenmile Fork and Fifteenmile Fork. Alex Energy samples twice monthly at monitoring location D058 (37° 59' 35.0000", -81° 26' 52.0000") and DTF1 (38° 0' 30.0000", -81° 26' 56.0000"), both of which are located in Tenmile Fork downstream of Durable Rock Fills A and B, and at DFF2 (37° 59' 24.0000", -81° 25' 44.0000"), located in Fifteenmile Fork downstream of Durable Rock Fill C and Valley Fills No. 1, 2, and 3.

WV/NPDES Permit WV1014684, held by Catenary Coal Company, LLC, requires instream monitoring at a location in Tenmile Fork. Catenary Coal Company samples twice monthly at monitoring location UTF (37° 59' 2.0000", -81° 27' 9.0000"), which is located immediately downstream of Durable Rock Fill B.

The instream sampling by Alex Energy and Catenary Coal Company show high levels of ionic pollution (conductivity, sulfates, TDS) and selenium. The conductivity levels regularly exceed 1000 µmhos/cm and the selenium levels regularly exceed the chronic water quality standard of 5 µg/L at all of these locations. *See* Appendix A. The latest publicly available samples from each location show high levels of pollutants:

WV1014684, UTF				
date	parameter	min	avg	max
5/31/2015	Selenium (µg/L)	6.55	7.59	8.62
	Conductivity (µmhos/cm)	1580	1655	1730
	TDS (mg/L)	1058	1082	1106
	Sulfates (mg/L)	524.0	541.0	558.0

WV1022113, D058				
date	parameter	min	avg	max
3/31/2015	Selenium (µg/L)	15	16.4	17.8
	Conductivity (µmhos/cm)	906	993	1080
	TDS (mg/L)	721	780	839
	Sulfates (mg/L)	336	376	415

WV1022113, DTF1				
date	parameter	min	avg	max
3/31/2015	Selenium (µg/L)	11.4	12.6	13.7
	Conductivity (µmhos/cm)	873	996	1120
	TDS (mg/L)	683	770	858
	Sulfates (mg/L)	326	381	436

WV1022113, DFF2 ³				
date	parameter	min	avg	max
9/30/2014	Selenium (µg/L)	8.84	10.175	11.51
	Conductivity (µmhos/cm)	1292	1295	1298
	TDS (mg/L)	986	1005	1024
	Sulfates (mg/L)	511.94	546.51	581.08

The West Virginia Department of Environmental Protection's Watershed Assessment Branch sampled the water quality at the toe of Durable Rock Fill A. The results of that sampling were:

Stream Name	Sample Date	Ancode	Mile Point	Latitude	Longitude	Parameter	Value	Units
UNT/Tenmile Fork RM 5.64	6/27/2012	WVK-61-L-7	0.1	37.99266667	-81.44652778	Se Total	0.0243	mg/L or ppm
UNT/Tenmile Fork RM 5.64	6/27/2012	WVK-61-L-7	0.1	37.99266667	-81.44652778	Specific Conductance	1924	uS or umhos/cm
UNT/Tenmile Fork RM 5.64	6/27/2012	WVK-61-L-7	0.1	37.99266667	-81.44652778	Sulfate	772	mg/L or ppm
UNT/Tenmile Fork RM 5.64	6/27/2012	WVK-61-L-7	0.1	37.99266667	-81.44652778	TDS	1530	mg/L or ppm

West Virginia Stream Condition Indices (WVSCI) taken by the West Virginia Department of Environmental Protection's Watershed Assessment Branch show that both Tenmile Fork and Fifteenmile Fork are biologically impaired:

Stream Name	Sample Date	Ancode	Mile Point	Latitude	Longitude	WVSCI Score
Tenmile Fork	8/30/2011	WVK-61-L	0.1	38.06674722	-81.44900556	47.5
Tenmile Fork	8/30/2011	WVK-61-L	2.4	38.03654722	-81.45527500	65
Tenmile Fork	9/21/2011	WVK-61-L	4.2	38.01300000	-81.44975000	41.7

³ For unknown reasons, discharge monitoring reports for WV/NPDES Permit WV1022113 report instream sampling point DFF2 on as "not constructed" for October 2014 through March 2015.

Fifteenmile Fork	8/21/2012	WVK-61-O	0	38.01755556	-81.42063889	45
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Tenmile Fork and Fifteenmile Fork are also listed on the West Virginia 2012 303(d) list as impaired for selenium. The only potential sources of the above levels of conductivity, sulfates, total dissolved solids, and selenium into Tenmile Fork and Fifteenmile Fork, at the places sampled by Alex Energy, Catenary Coal Company, and the West Virginia Department of Environmental Protection's Watershed Assessment Branch, are the valley fills on the former Kayford Mountain Top Mine, the Kayford Mountain Top No. 2 Mine, and Mine No. 29.

II. Clean Water Act Violations

Section 301 of the CWA bans "any addition of any pollutant to navigable waters from any point source" without a permit. *West Virginia Highlands Conservancy v. Huffman*, 625 F.3d 159, 165 (4th Cir. 2010). This prohibition applies to post-mining discharges. The *Huffman* court stated that the U.S. Environmental Protection Agency in its 1985 regulations (50 Fed. Reg. 41296):

reemphasize[d] that post-bond release discharges are subject to regulation under the Clean Water Act," observing that "[i]f a point source discharge occurs after bond release, then it must be regulated through an NPDES permit." *Id.* at 41298. The comments to the rule sharpen this point, flatly stating that "[a]ny point source discharge after bond release does require a permit." *Id.* at 41304 (emphasis added). To the extent parties do not comply, the regulations state that they will be "subject to enforcement action by EPA under section 309 of the Act and by citizens under section 505(a)(1) of the Act." *Id.* at 41298.

625 F.3d at 166. In the absence of an active operator, the landowner is responsible for obtaining a permit and complying with its provisions. *Webb v. Gorsuch*, 699 F.2d 157, 161 (4th Cir. 1983) ("post-mining discharges from a point source such as these mines are illegal in the absence of an NPDES permit, the conditions of which the owner of the property must meet").

The valley fills described above are point sources as that term is used in the context of the CWA. 33 U.S.C. § 1362(14). The fills convey discharges of groundwater and surface water into Tenmile Fork, Fifteenmile Fork, and their tributaries. As a result of the way valley fills are constructed, valley fills attenuate water flows, creating perennial discharges. Because of the pollutant concentrations in those streams and because of the nature of discharges from valley fills, we have a good faith belief that the above-described fills discharged pollutants including (1) selenium, (2) total dissolved solids (TDS), (3) sulfates, and (4) other ions associated with the measure of conductivity in surface coal mine drainage to Tenmile Fork, Fifteenmile Fork, and its tributaries at least twice a month, each month, since their sediment ponds were removed, and each and every time water flows from the toe of the fills.

Penn Virginia became liable for the discharges from Valley Fills No. 1, 2, and 3 at least on March 14, 2014, when WV/NPDES Permit WV0053236 was completely released. In the

alternative, Penn Virginia became responsible for the discharges from Valley Fills No. 2 and 3 on September 25, 2013 when Surface Mining Permit Z002781 was released and all outfalls had already been deleted from WV/NPDES Permit WV0053236 and for the discharges from Valley Fill No. 1 on December 22, 2010 when Increment 3 of Surface Mining Permit Z002781 was released and the relevant outfall had previously been deleted from WV/NPDES Permit WV0053236. The streams receiving the valley fills' discharges are "navigable waters" under the Act. Without an active operator to control the discharges, Penn Virginia is responsible for obtaining and complying with a WV/NPDES Permit for those sources. It has not done so. As a result, Penn Virginia is in violation of Section 301(a) of the CWA, 33 U.S.C. 1311(a), for discharging pollutants without a permit.

Either Penn Virginia or LCC is responsible for the discharges from Durable Rock Fills A, B, and C. If the stormwater coverage of WV/NPDES Permit WV1012461 makes LCC the "current superintendent" or otherwise in control of the discharge, then LCC is responsible for the unpermitted discharges from Durable Rock Fills A, B, and C. *Huffman*, 625 F.3d 159, 167 (4th Cir. 2010). The three durable rock fills have been discharging without a permit since the removal of their sediment ponds and deletion of associated outfalls from WV/NPDES Permit WV1012461 on September 15, 2010. As the entity in control of the discharges, LCC is responsible for obtaining and complying with a WV/NPDES Permit for those sources. It has not done so. As a result, LCC is in violation of Section 301(a) of the CWA, 33 U.S.C. 1311(a), for discharging pollutants without a permit.

If the stormwater coverage of WV/NPDES Permit WV1012461 does not make LCC the superintendent or operator of the discharges from Durable Rock Fills A, B, and C, then Penn Virginia is liable for their discharges as the landowner. In such case, Penn Virginia has been liable for the discharges from Durable Rock Fill A since December 22, 2010 when Surface Mining Permit S600989 was released, and for the discharges from Durable Rock Fills B and C since Surface Mining Permit S302791 was released on November 18, 2013. Without an active operator to control the discharges, Penn Virginia is responsible for obtaining and complying with a WV/NPDES Permit for those sources. It has not done so. As a result, Penn Virginia is in violation of Section 301(a) of the CWA, 33 U.S.C. 1311(a), for discharging pollutants without a permit.

III. Conclusion

As described above, Penn Virginia has discharged pollutants from three unpermitted point sources on its property, and either Penn Virginia or LCC has discharged pollutants from an additional three point sources, into waters of the United States that are subject to the protection of the Clean Water Act. In the absence of evidence of remedial steps taken to abate the discharges, we assume that they are ongoing. Consequently, Penn Virginia and, potentially, LCC have violated and are in ongoing violation of Section 301(a) of the CWA, 33 U.S.C. § 1311(a). If Penn Virginia and LCC do not cease those violations, we intend to bring a citizen suit against them under Section 505(a)(1) of the Clean Water Act, 33 U.S.C. § 1365(a)(1), seeking civil penalties and injunctive relief to enforce the Act. We encourage Penn Virginia and LCC to contact us if they do not currently own the property containing the valley fills described above, they do not currently operate, superintend, or have control over the durable rock fills

described above, or if they have taken any remedial action to abate the discharges described above.

If Penn Virginia and LCC do not advise us of any remedial steps during the 60-day period, we will assume that no such steps have been taken and that violations are likely to continue. We would be happy to meet with Penn Virginia or its representative, and LCC or its representative, to attempt to resolve these claims within the 60-day notice period.

Sincerely,



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APPENDIX A

All selenium samples are reported in µg/L unless otherwise marked. All conductivity samples are reported in µmhos/cm. All TDS samples are reported in mg/L. All sulfates samples are reported in mg/L.

Tenmile Fork

WV1014684, UTF				
date	parameter	min	avg	max
10/31/2010	Selenium (mg/l)	0.01	0.01	0.02
11/30/2010	Selenium (mg/l)	0.02	0.02	0.02
12/31/2010	Selenium (mg/l)	0.01	0.01	0.01
1/31/2011	Selenium (mg/l)	0.01	0.02	0.02
2/28/2011	Selenium (mg/l)	0.01	0.01	0.01
3/31/2011	Selenium (mg/l)	0.00	0.01	0.01
4/30/2011	Selenium (mg/l)	0.01	0.01	0.01
5/31/2011	Selenium (mg/l)	0.01	0.01	0.01
6/30/2011	Selenium (mg/l)	0.01	0.01	0.01
7/31/2011	Selenium (mg/l)	0.01	0.01	0.01
8/31/2011	Selenium (mg/l)	0.01	0.01	0.01
9/30/2011	Selenium	3.20	3.60	3.90
10/31/2011	Selenium	8.80	12.20	15.50
11/30/2011	Selenium	14.70	14.90	15.10
12/31/2011	Selenium	10.30	13.30	16.30
1/31/2012	Selenium	5.7	9.8	13.9
2/29/2012	Selenium	9.8	11.9	13.9
3/31/2012	Selenium	14.8	14.9	14.9
4/30/2012	Selenium	10.5	11.9	13.3
5/31/2012	Selenium	6.0	10.3	14.5
6/30/2012	Selenium	7.4	9.9	12.3
7/31/2012	Selenium	5.2	5.6	6.0
8/31/2012	Selenium	5.3	5.7	6.0
9/30/2012	Selenium	6.6	6.8	6.9
10/31/2012	Selenium	11	11.9	12.8
11/30/2012	Selenium	15.3	15.4	15.4
12/31/2012	Selenium	9.99	10.3	10.7
1/31/2012	Selenium	5.7	9.8	13.9
1/31/2013	Selenium	7.3	9.0	10.7
2/28/2013	Selenium	10.2	10.8	11.3
3/31/2013	Selenium	8.7	9.0	9.2
4/30/2013	Selenium	8.2	8.4	8.5
5/31/2013	Selenium	7.0	8.5	9.9

6/30/2013	Selenium	5.6	6.8	7.9
10/31/2013	Selenium	2.3	4.6	6.8
	Conductivity	1920	1980	2040
	TDS	1358	1361	1364
	Sulfates	706	709	712
11/30/2013	Selenium	5.7	6.7	7.6
	Conductivity	1770	1820	1870
	TDS	1096	1159	1221
	Sulfates	610	621.5	633
12/31/2013	Selenium	10.7	13.6	16.5
	Conductivity	1260	1420	1580
	TDS	848	904	959
	Sulfates	466	480	494
1/31/2014	Selenium	8.5	11.3	14.0
	Conductivity	979	1420	1860
	TDS	722	917	1112
	Sulfates	376	482	588
2/28/2014	Selenium	10.6	13.2	15.7
	Conductivity	1410	1460	1510
	TDS	870	926	981
	Sulfates	494	532	570
3/31/2014	Selenium	9.0	9.8	10.6
	Conductivity	1370	1425	1480
	TDS	850	880	909
	Sulfates	425	454.5	484
4/30/2014	Selenium	6.9	8.6	10.3
	Conductivity	993	1367	1740
	TDS	804	922	1040
	Sulfates	395	463.5	532
5/31/2014	Selenium	6.9	7.3	7.7
	Conductivity	1340	1560	1780
	TDS	872	992	1112
	Sulfates	429	481.5	534
6/30/2014	Selenium	7.9	8.7	9.4
	Conductivity	1710	1725	1740
	TDS	1003	1030	1057
	Sulfates	496	501	506
7/31/2014	Selenium	6.4	7.9	9.4
	Conductivity	1950	1965	1980
	TDS	1245	1286	1327
	Sulfates	586	809	1032
8/31/2014	Selenium	6.6	6.9	7.2

	Conductivity	1830	1890	1950
	TDS	1163	1213	1262
	Sulfates	556	605	654
9/30/2014	Selenium	5.2	7.7	10.1
	Conductivity	2070	2240	2410
	TDS	1054	1148	1242
	Sulfates	506	568	630
10/31/2014	Selenium	5.52	6.46	7.4
	Conductivity	1260	1280	1300
	TDS	626	683	740
	Sulfates	264	307.5	351
11/30/2014	Selenium	6.96	7.53	8.09
	Conductivity	1580	1820	2060
	TDS	940	964	988
	Sulfates	468	480	492
12/31/2014	Selenium	6	7.41	8.81
	Conductivity	1370	1530	1690
	TDS	775	864	953
	Sulfates	376	443	510
1/31/2015	Selenium	8.41	8.53	8.65
	Conductivity	1710	1775	1840
	TDS	949	958	967
	Sulfates	488	492	496
2/28/2015	Selenium	6.71	7.96	9.2
	Conductivity	1291	1416	1540
	TDS	791	849	907
	Sulfates	384	657	930
3/31/2015	Selenium	6.43	8.41	10.39
	Conductivity	946	1253	1560
	TDS	560	747	933
	Sulfates	281	381.5	482
4/30/2015	Selenium	7.12	8.18	9.23
	Conductivity	1201	1269	1337
	TDS	824	861	897
	Sulfates	422.0	434.5	447.0
5/31/2015	Selenium	6.55	7.59	8.62
	Conductivity	1580	1655	1730
	TDS	1058	1082	1106
	Sulfates	524.0	541.0	558.0

WV1022113, DTF1				
date	parameter	min	avg	max
10/31/2010	Selenium	19.86	20.42	20.97
11/30/2010	Selenium	17.03	17.15	17.26
12/31/2010	Selenium	15.33	17.95	20.57
1/31/2011	Selenium	23.80	24.19	24.58
2/28/2011	Selenium	20.69	25.48	30.26
3/31/2011	Selenium	24.67	25.33	25.99
4/30/2011	Selenium	16.39	17.83	19.26
5/31/2011	Selenium	15.25	16.57	17.89
7/31/2011	Selenium	12.64	30.00	47.36
8/31/2011	Selenium	12.90	13.06	13.21
9/30/2011	Selenium	8.96	11.50	14.04
10/31/2011	Selenium	0.87	8.34	15.81
11/30/2011	Selenium	11.76	13.22	14.67
12/31/2011	Selenium	15.10	17.39	19.68
1/31/2012	Selenium	13.52	16.365	19.21
2/29/2012	Selenium	13.43	13.795	14.16
3/31/2012	Selenium	16.65	17.195	17.74
4/30/2012	Selenium	11.90	14.63	17.36
5/31/2012	Selenium	14.19	15.205	16.22
6/30/2012	Selenium	14.80	15.585	16.37
7/31/2012	Selenium	7.40	9.57	11.74
8/31/2012	Selenium	13.03	14.51	15.99
9/30/2012	Selenium	10.14	11.66	13.18
10/31/2012	Selenium	10.97	11.31	11.65
11/30/2012	Selenium	14.56	16.08	17.60
12/31/2012	Selenium	9.66	9.955	10.25
1/31/2013	Selenium	17.61	18.495	19.38
2/28/2013	Selenium	4.88	12.43	19.98
3/31/2013	Selenium	18.60	22.29	25.98
4/30/2013	Selenium	13.38	15.02	16.66
5/31/2013	Selenium	3.26	3.565	3.87
6/30/2013	Selenium	11.91	13.27	14.63
07/31/2013	Selenium	14.22	14.895	15.57
08/31/2013	Selenium	13.55	14.66	15.77
09/30/2013	Selenium	12.92	13.05	13.18
10/31/2013	Selenium	9.75	10.025	10.30
11/30/2013	Selenium	12.34	12.345	12.35
12/31/2013	Selenium	12.76	14.225	15.69
1/31/2014	Selenium	17.88	18.75	19.62
2/28/2014	Selenium	16.70	17.04	17.38

3/31/2014	Selenium	15.32	15.46	15.60
4/30/2014	Selenium	15.07	16.16	17.25
	Conductivity	1008.00	1094.50	1181.00
	TDS	796.00	889.00	982.00
	Sulfates	370.50	427.80	485.10
5/31/2014	Selenium	15.02	15.385	15.75
	Conductivity	1072.00	1112.50	1153.00
	TDS	850.00	921.50	993.00
	Sulfates	415.46	443.74	472.02
6/30/2014	Selenium	13.28	15.07	16.86
	Conductivity	1140.00	1174.00	1208.00
	TDS	900.00	927.00	954.00
	Sulfates	349.96	402.36	454.76
7/31/2014	Selenium	13.32	13.72	14.12
	Conductivity	1352.00	1369.00	1386.00
	TDS	1079.00	1121.50	1164.00
	Sulfates	515.05	538.145	561.24
8/31/2014	Selenium	11.39	12.165	12.94
	Conductivity	1279.00	1339.50	1400.00
	TDS	1030.00	1054.00	1078.00
	Sulfates	513.68	549.28	584.88
9/30/2014	Selenium	13.07	14.315	15.56
	Conductivity	1195.00	1284.00	1373.00
	TDS	808.00	975.50	1143.00
	Sulfates	430.70	505.04	579.38
10/31/2014	Selenium	7.06	8.53	9.99
	Conductivity	793	9.26	1060
	TDS	524	564	603
	Sulfates	305	338	370
11/30/2014	Selenium	9.59	12.2	14.9
	Conductivity	1170	1214	1254
	TDS	833	874	914
	Sulfates	437	466	495
12/31/2014	Selenium	5.54	7.87	10.2
	Conductivity	1190	1235	1280
	TDS	853	882	910
	Sulfates	482	494	505
1/31/2015	Selenium	3.8	3.95	4.1
	Conductivity	1110	1285	1460
	TDS	908	950	992
	Sulfates	510	533	556
2/28/2015	Selenium	3.71	6.13	8.55

	Conductivity	1010	1135	1260
	TDS	831	884	936
	Sulfates	434	450	465
3/31/2015	Selenium	11.4	12.6	13.7
	Conductivity	873	996	1120
	TDS	683	770	858
	Sulfates	326	381	436

WV1022113, D058				
date	parameter	min	avg	max
10/31/2010	Selenium	39.41	39.81	40.21
11/30/2010	Selenium	32.26	32.26	32.26
12/31/2010	Selenium	29.80	30.10	30.39
1/31/2011	Selenium	24.65	27.36	30.06
2/28/2011	Selenium	27.04	32.94	38.83
3/31/2011	Selenium	30.82	31.84	32.85
4/30/2011	Selenium	19.28	20.53	21.78
5/31/2011	Selenium	17.50	19.55	21.60
7/31/2011	Selenium	17.68	21.03	24.38
8/31/2011	Selenium	18.68	18.68	18.68
9/30/2011	Selenium	16.53	17.51	18.48
10/31/2011	Selenium	2.06	12.13	22.19
11/30/2011	Selenium	<0.24	12.32	21.23
12/31/2011	Selenium	20.23	23.09	25.94
1/31/2012	Selenium	14.44	19.7	24.96
2/29/2012	Selenium	15.44	16.31	17.18
3/31/2012	Selenium	18.40	20.91	23.42
4/30/2012	Selenium	20.50	20.74	20.98
5/31/2012	Selenium	16.80	18.70	20.60
6/30/2012	Selenium	20.68	20.84	21.00
7/31/2012	Selenium	15.94	16.795	17.65
8/31/2012	Selenium	19.88	20.455	21.03
9/30/2012	Selenium	19.46	20.36	21.26
10/31/2012	Selenium	22.68	22.72	22.76
11/30/2012	Selenium	15.82	19.05	22.28
12/31/2012	Selenium	12.43	12.745	13.06
1/31/2013	Selenium	18.88	21.12	23.36
2/28/2013	Selenium	4.88	12.805	20.73
3/31/2013	Selenium	23.26	23.335	23.41
4/30/2013	Selenium	15.90	17.49	19.08
5/31/2013	Selenium	3.77	4.245	4.72

6/30/2013	Selenium	13.40	15.91	18.42
07/31/2013	Selenium	19.55	20.275	21.00
08/31/2013	Selenium	19.28	19.945	20.61
09/30/2013	Selenium	21.08	22.24	23.40
10/31/2013	Selenium	14.26	14.26	14.26
11/30/2013	Selenium	24.32	25.96	27.60
12/31/2013	Selenium	14.47	16.155	17.84
1/31/2014	Selenium	14.79	17.605	20.42
2/28/2014	Selenium	17.58	18.285	18.99
3/31/2014	Selenium	15.56	15.69	15.82
4/30/2014	Selenium	16.08	17.855	19.63
	Conductivity	1098	1139.5	1181
	TDS	860	951	1042
	Sulfates	414.80	481.94	549.08
5/31/2014	Selenium	15.88	17.375	18.87
	Conductivity	1100	1184.5	1269
	TDS	857	973.5	1090
	Sulfates	404.04	467.21	530.38
6/30/2014	Selenium	16.17	17.425	18.68
	Conductivity	1235	1269.5	1304
	TDS	1034	1059	1084
	Sulfates	456.25	469.505	482.76
7/31/2014	Selenium	16.33	17.19	18.05
	Conductivity	1464	1465	1466
	TDS	1163	1196.5	1230
	Sulfates	516.30	554.53	592.76
8/31/2014	Selenium	14.78	15.965	17.15
	Conductivity	1276	1365	1454
	TDS	973	1042.5	1112
	Sulfates	477.74	524.12	570.50
9/30/2014	Selenium	16.99	18.185	19.38
	Conductivity	1241	1354	1467
	TDS	910	1084	1258
	Sulfates	417.72	506.60	595.48
10/31/2014	Selenium	9.56	11.5	13.5
	Conductivity	818	949	1080
	TDS	554	648	743
	Sulfates	323	342	362
11/30/2014	Selenium	9.96	11.5	13
	Conductivity	1030	1210	1390
	TDS	741	876	1010
	Sulfates	392	456	520

12/31/2014	Selenium	11.5	14.2	16.8
	Conductivity	954	1087	1220
	TDS	688	805	922
	Sulfates	375	416	458
1/31/2015	Selenium	15.2	15.5	15.8
	Conductivity	730	1020	1310
	TDS	827	836	845
	Sulfates	456	474	492
2/28/2015	Selenium	10.2	12.1	14.1
	Conductivity	775	952	1130
	TDS	586	710	833
	Sulfates	275	336	396
3/31/2015	Selenium	15	16.4	17.8
	Conductivity	906	993	1080
	TDS	721	780	839
	Sulfates	336	376	415

Fifteenmile Fork

WV1022113, DFF2				
date	parameter	min	avg	max
10/31/2010	Selenium	10.23	10.28	10.33
11/30/2010	Selenium	8.98	9.32	9.65
12/31/2010	Selenium	12.47	12.90	13.32
1/31/2011	Selenium	10.28	13.60	16.91
2/28/2011	Selenium	12.41	17.32	22.23
3/31/2011	Selenium	12.17	14.56	16.94
4/30/2011	Selenium	10.27	11.42	12.56
5/31/2011	Selenium	9.70	10.16	10.62
7/31/2011	Selenium	6.24	7.02	7.80
8/31/2011	Selenium	6.27	6.92	7.57
9/30/2011	Selenium	8.37	8.75	9.13
10/31/2011	Selenium	12.88	17.33	21.78
11/30/2011	Selenium	7.87	9.04	10.20
12/31/2011	Selenium	10.58	11.45	12.32
1/31/2012	Selenium	10.3	11.17	12.04
2/29/2012	Selenium	7.00	8.11	9.22
3/31/2012	Selenium	9.25	9.985	10.72
4/30/2012	Selenium	4.33	6.785	9.24
5/31/2012	Selenium	7.35	7.99	8.63
6/30/2012	Selenium	7.72	8.18	8.64

7/31/2012	Selenium	3.23	4.645	6.06
8/31/2012	Selenium	7.27	8.635	10.00
9/30/2012	Selenium	7.06	7.94	8.82
10/31/2012	Selenium	6.02	7.055	8.09
11/30/2012	Selenium	10.67	11.43	12.19
12/31/2012	Selenium	6.31	6.745	7.18
1/31/2013	Selenium	8.18	10.005	11.83
2/28/2013	Selenium	6.78	9.735	12.69
3/31/2013	Selenium	12.04	12.275	12.51
4/30/2013	Selenium	7.57	9.145	10.72
5/31/2013	Selenium	2.14	2.165	2.19
6/30/2013	Selenium	5.95	7.30	8.65
07/31/2013	Selenium	9.21	9.385	9.56
08/31/2013	Selenium	8.19	8.435	8.68
09/30/2013	Selenium	3.24	6.255	9.27
10/31/2013	Selenium	6.92	6.955	6.99
11/30/2013	Selenium	7.94	11.21	14.48
12/31/2013	Selenium	11.31	14.575	17.84
1/31/2014	Selenium	8.59	9.915	11.24
2/28/2014	Selenium	10.91	10.96	11.01
3/31/2014	Selenium	8.48	8.90	9.32
4/30/2014	Selenium	8.25	9.92	11.59
	Conductivity	1086.00	1115.50	1145.00
	TDS	859.00	898.50	938.00
	Sulfates	482.12	492.03	501.94
5/31/2014	Selenium	8.38	9.425	10.47
	Conductivity	1121.00	1122.00	1123.00
	TDS	900.00	936.00	972.00
	Sulfates	488.64	530.57	572.50
6/30/2014	Selenium	7.92	8.595	9.27
	Conductivity	1185.00	1198.50	1212.00
	TDS	936.00	955.50	975.00
	Sulfates	533.00	538.58	544.16
7/31/2014	Selenium	6.02	6.545	7.07
	Conductivity	1222.00	1242.00	1262.00
	TDS	978.00	999.00	1020.00
	Sulfates	579.16	601.07	622.98
8/31/2014	Selenium	6.94	7.235	7.53
	Conductivity	1302.00	1309.00	1316.00
	TDS	1028.00	1059.00	1090.00
	Sulfates	576.72	700.76	824.80
9/30/2014	Selenium	8.84	10.175	11.51

	Conductivity	1292.00	1295.00	1298.00
	TDS	986.00	1005.00	1024.00
	Sulfates	511.94	546.51	581.08
10/31/2014	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	
11/30/2014	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	
12/31/2014	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	
1/31/2015	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	
2/28/2015	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	
3/31/2015	Selenium	Not	Constructed	
	Conductivity	Not	Constructed	
	TDS	Not	Constructed	
	Sulfates	Not	Constructed	